NC Recycling Infrastructure

2012 Eastern Carolina Environmental Conference
Miller's Landing, Cherry Point MCAS

Matt Todd, Industrial Development Specialist
NC Department of Environment & Natural Resources
Recycling Business Assistance Center

North Carolina Department of Environment and Natural Resources

RBAC

The North Carolina **Recycling Business Assistance Center**

"Recycling Industry *Economic Developers"*

North Carolina Department of Environment and Natural Resources
NCDENR

NC Recycling Infrastructure

- Collection
- Primary Processing
- Secondary Processing
- End Users

- Commodity price tracking
- Business development
- Growth areas for 2012 and beyond

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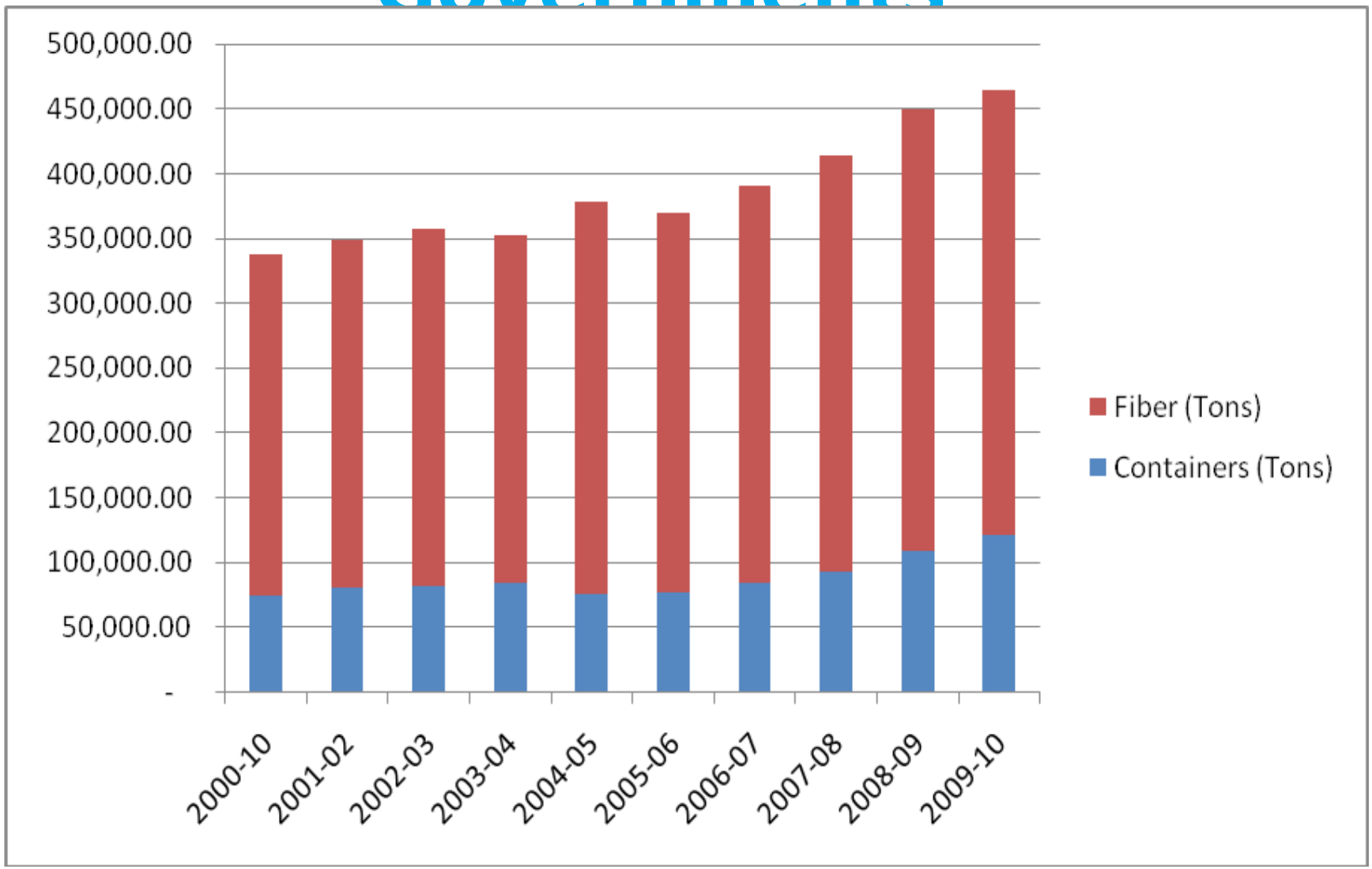
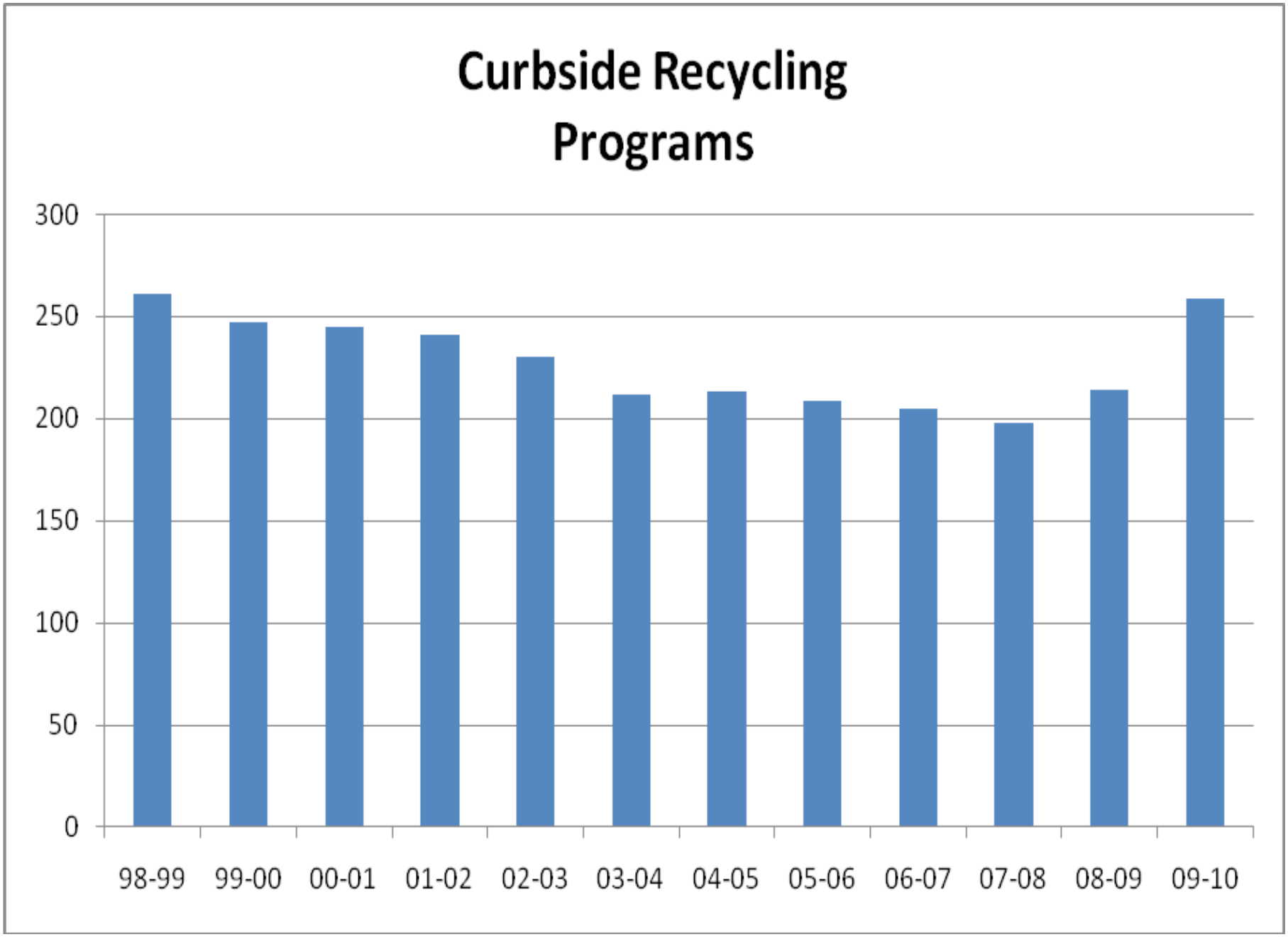
Recovery of Traditional Materials by NC Local Governments



Top Ten Recycling Counties in NC*

* includes municipalities within the county

- Pitt County
- Catawba County
- Buncombe County
- Orange County
- Swain County
- Dare County
- Watauga County
- Macon County
- Guilford County
- Pamlico County


Curbside Recycling Programs
300
250
200
150
100
50
0
98-99
99-00
00-01
01-02
02-03
03-04
04-05
05-06
06-07
07-08
08-09
09-10

Examples of Communities that have added (or are adding) curbside:

- Kannapolis
- Mooresville
- Stedman
- Ronda
- North Wilkesboro
- Wilkesboro
- Troutman
- Kings Mountain
- Trinity
- Aberdeen
- Dunn
- Black Creek
- Middlesex
- Smithfield
- Curbside through subscription:
  - Albemarle
  - Granite Quarry
  - Lenior
  - Wrightsville Beach

Curbside – Transition to Carts

- Many major cities now operating carts-b
  programs:

Greensboro	Charlotte
Fayetteville	Durham
High Point	Jacksonville
Raleigh (partial)	Winston-Salem (pilot)

- New small-medium sized towns programs starting with carts.
- Estimated total # of households who have gotten a cart this year (2011):
  - 397,304
  - 11,919,160 gallons of additional household recycling capacity
- Cart trend will continue to grow, supported by state funding.

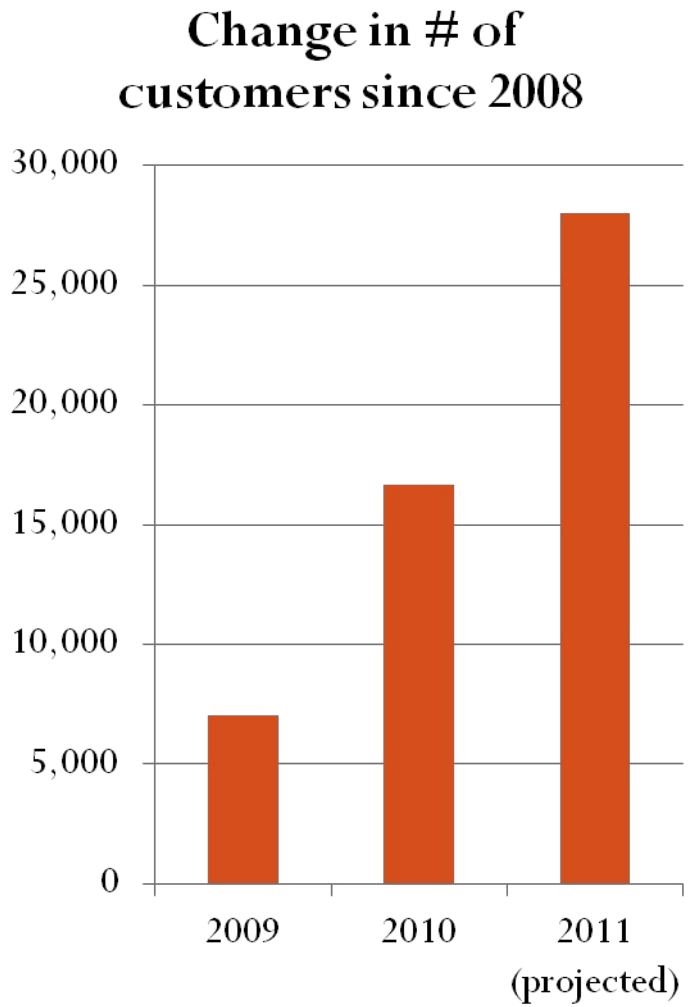
Increasing the Range of Materials

- Some programs have changed what is recyclable in their communities – examples:
  - Orange County #2s and #5s
  - Mecklenburg curbside mix
- Plastics
  - Industrial plastics – example: Iredell County
- Cartons

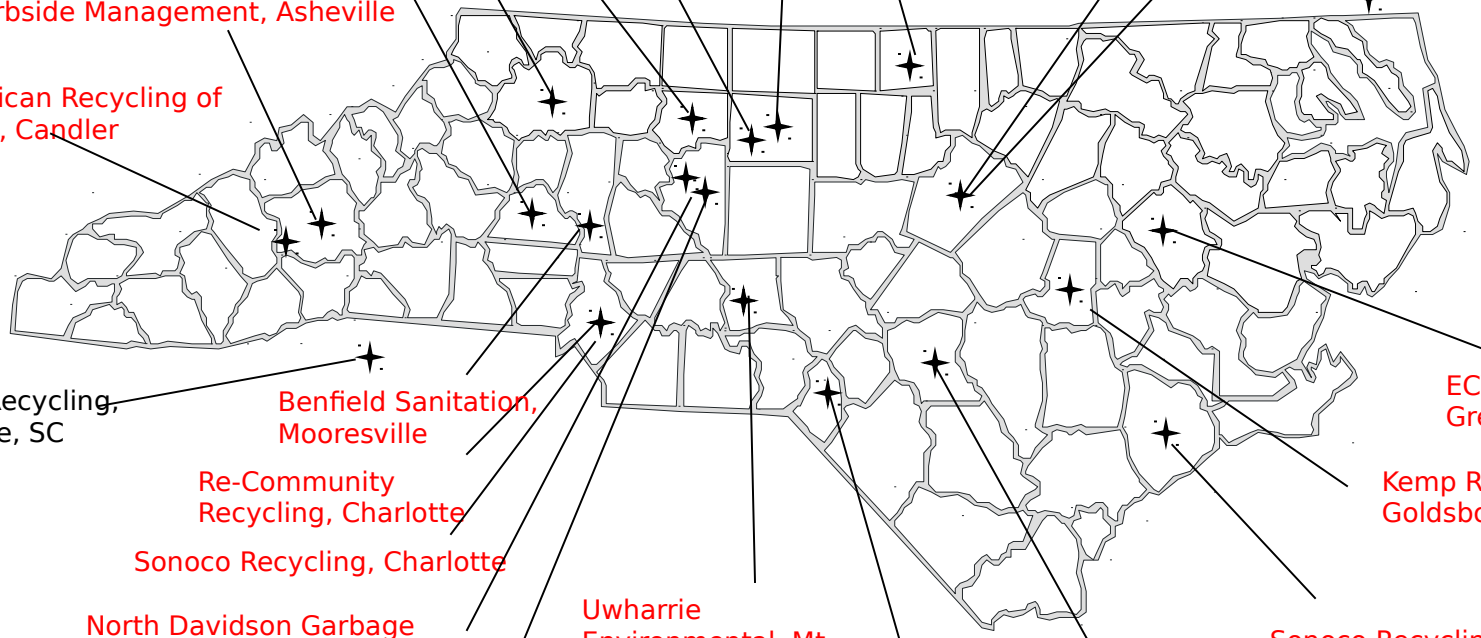
BEGINNING JULY 2010,
MECKLENBURG COUNTY RESIDENTS CAN RECYCLE MORE ITEMS THAN BEFORE!
re•think RECYCLING
Items that WILL be accepted for RECYCLING:
NEW
Plastic Bottles & Jugs except #6
Wide-Mouth Plastic Containers
Rigid Plastics
Empty Aerosol Cans
Milk & Juice Cartons Juice Boxes
Aluminum Cans
Glass Bottles & Jars
Cereal & Food Boxes
Cardboard Boxes flattened
Magazines & Phone Books
Paperback Books
Metal Food Cans
Junk Mail, Mixed Paper & Newspaper
For more information, visit:
www.WipeOutWaste.com
These items and others are accepted at your local recycling drop-off centers.
IMPORTANT INFORMATION ABOUT RECYCLING:
Empty and rinse all containers.
For more detailed recycling information, please contact your service provider.
Items that WILL NOT be accepted for RECYCLING:
NO Pizza Boxes
NO Bottle Caps or Lids
NO Plastic Bags NO Shredded Paper
NO Plastic Food Trays & Cups
NO Ceramics
NO Pots & Pans NO Glassware
NO Paper Plates & Napkins
NO Batteries, Light Bulbs or Wire Hangers
NO Clamshells or Styrofoam
RECYCLABLE ITEMS
NEW Plastic Containers (except #6)
NEW Rigid Plastics (toys, litter boxes and buckets)
NEW Empty Aerosol Cans
NEW Cartons & Juice Boxes
Cardboard (flattened)
Aluminum
Glass
Tin/Steel Cans
Paper (newspaper, brown paper bags, magazines, corrugated containers, junk mail, high-grade paper, cereal boxes, telephone books)
WIPE OUT WASTE
Waste Reduction in Mecklenburg County

Independent Haulers

- Small haulers and new recycling start-ups playing an increasing role in material collection:
  - ABC customers
  - Other commercial customers
  - Unincorporated residences
- Examples:
  - Green Pieces, Stanly County area – 130 to 2290 customers in four years.
  - Hatteras Recycling, Dare County – 335 to 1100 customers



Material Recovery Facilities in North Carolina



Waste Management Inc., Winston Salem
Foothills Sanitation & Recycling, N. Wilkesboro
GDS, Conover
Curbside Management, Asheville
American Recycling of WNC , Candler
Sonoco Recycling, Greenville, SC
Benfield Sanitation, Mooresville
Re-Community Recycling, Charlotte
Sonoco Recycling, Charlotte
North Davidson Garbage Service, Welcome
Davidson County MRF
High Point MRF
Re-Community Recycling, Greensboro
Uwharrie Environmental, Mt Gilead
Wagram Paper Stock, Wagram
Person Industries, Roxboro
Waste Management Inc., Raleigh
Sonoco Recycling, Raleigh
Pratt Industries, Fayetteville
Tidewater Fibre, Chesapeake, VA
ECVC, Greenville
Kemp Recyclers, Goldsboro
Sonoco Recycling, Jacksonville

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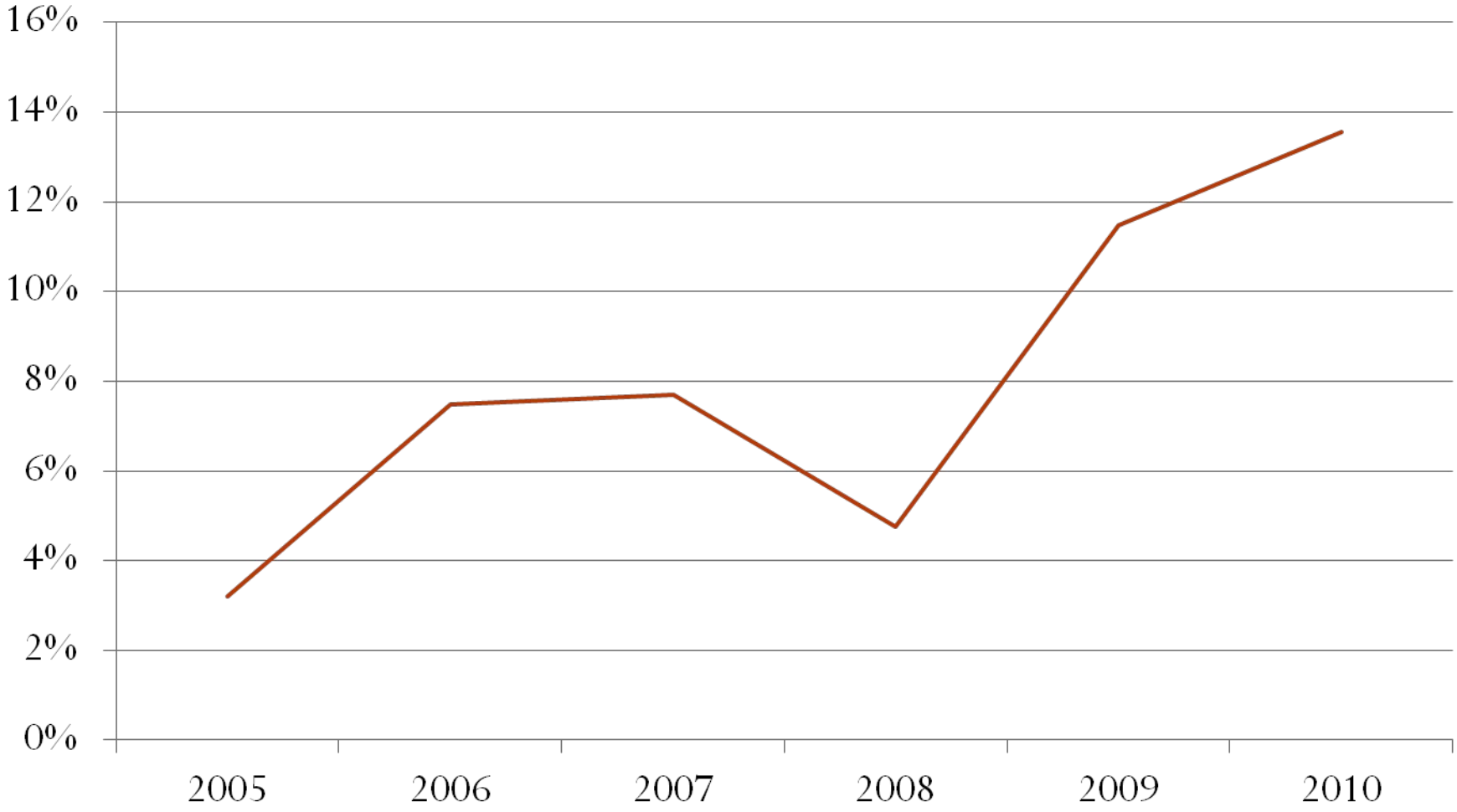
Red signifies Single Stream Facility

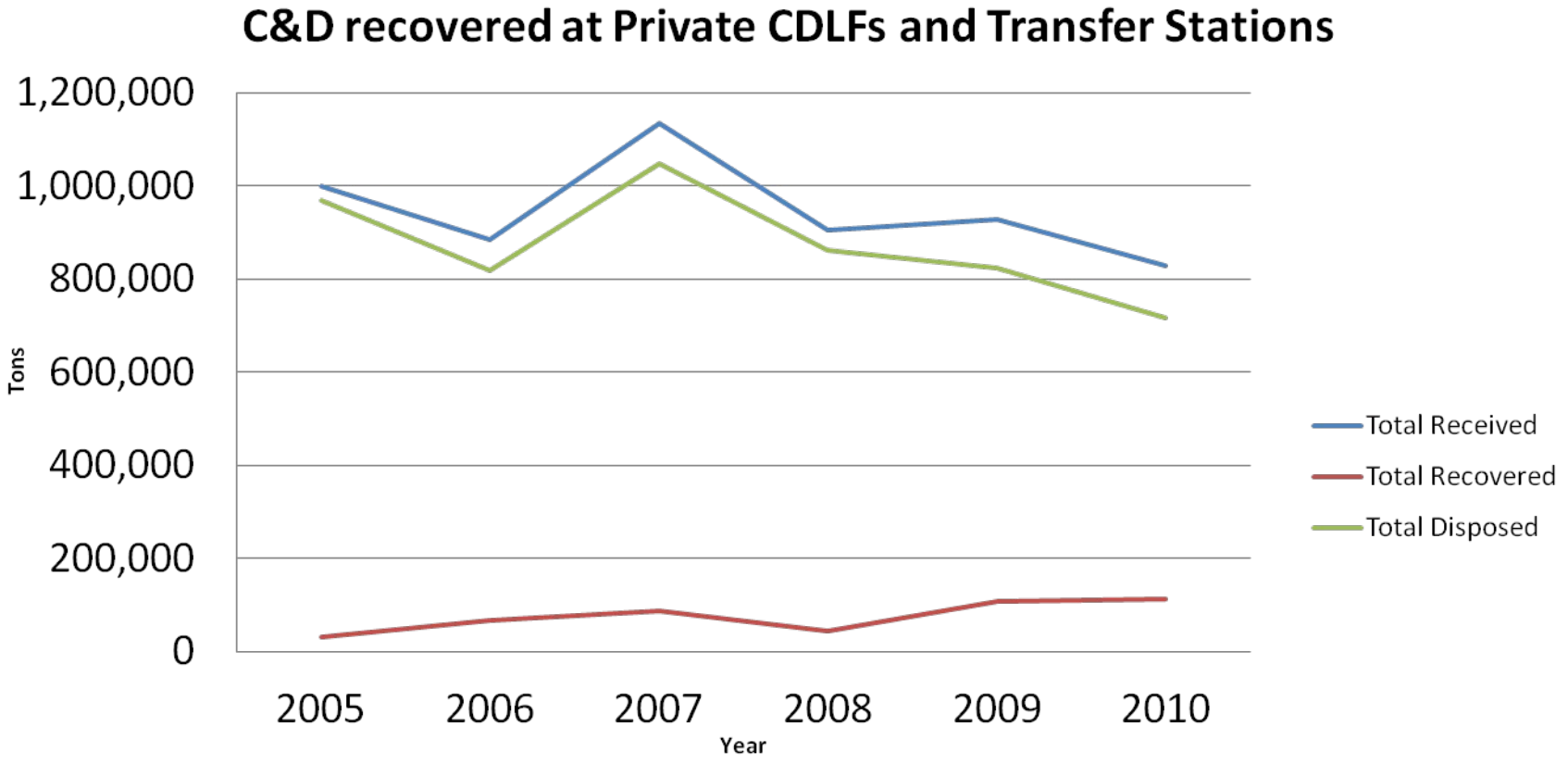
C&D Recycling

- Increasing interest and activity in C&D recycling, despite state of the construction economy.
- Successful regional C&D recycling conferences in 2010 & 2011.
- Leadership programs in Mecklenburg and Orange Counties
- Challenges for C&D Recycling:
  - Margins
  - Wood waste markets

C&D Recycling Progress: Ratio of C&D Recycling at Private Disposal Facilities

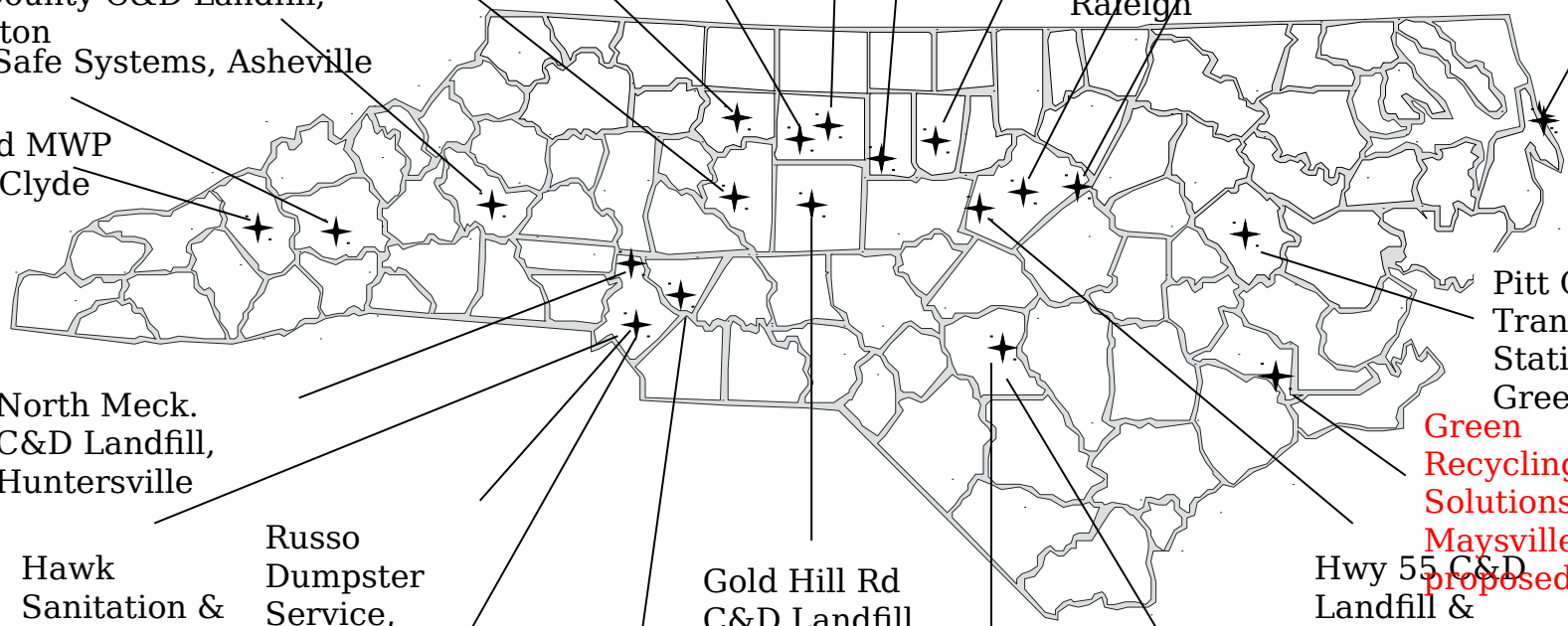


Private C&D Disposal Facilities Recycling More of Incoming Material



Data is from facilities open as of 2010.

C&D Facility Map



Orange County C&D Landfill, Chapel Hill

Abby Green, Winston Salem

A-1 Sandrock/ARC, Greensboro

Shotwell Landfill and Transfer Stations , Raleigh/Apex/Wendell

Davidson County C&D Landfill, Lexington

Coble Sandrock C&D Landfill, Liberty

Soundside Recycling,

WCA of High Point

WCA Material Reclamation, Raleigh

Burke County C&D Landfill, Morganton

Handle Safe Systems, Asheville

Haywood MWP Facility, Clyde

Pitt County Transfer Station, Greenville

North Meck. C&D Landfill, Huntersville

Green Recycling Solutions, Maysville - proposed

Hawk Sanitation & Recycling, Charlotte

Russo Dumpster Service, Charlotte

Gold Hill Rd C&D Landfill, Asheboro

Hwy 55 C&D Landfill & Recycling, Apex

The Linda Construction Co, Charlotte

Hwy 49 C&D Landfill & Recycling, Harrisburg

AAA Hauling, Fayetteville

iCan/River City Transfer Station, Fayetteville

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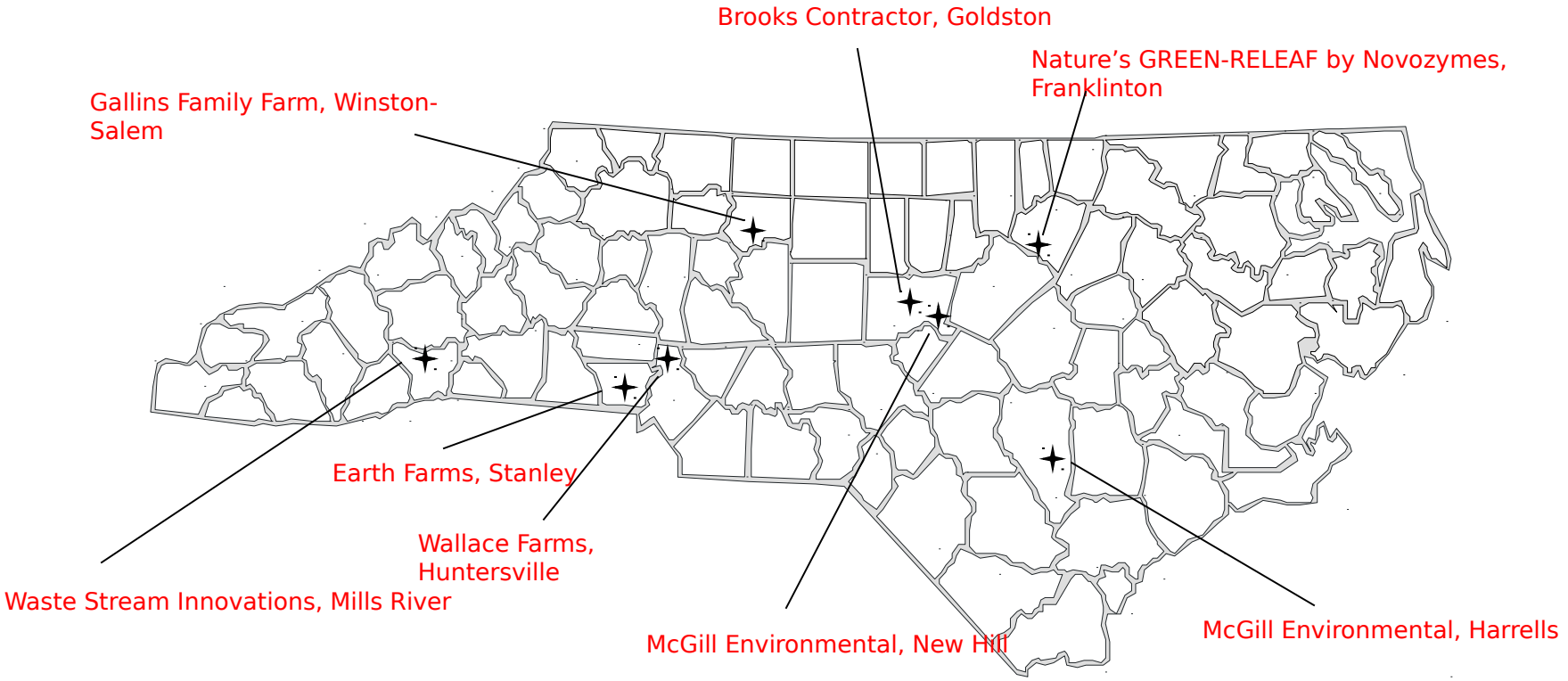
Type III* Compost Facilities in North Carolina



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*Type III compost facilities can accept food was

Secondary Processing

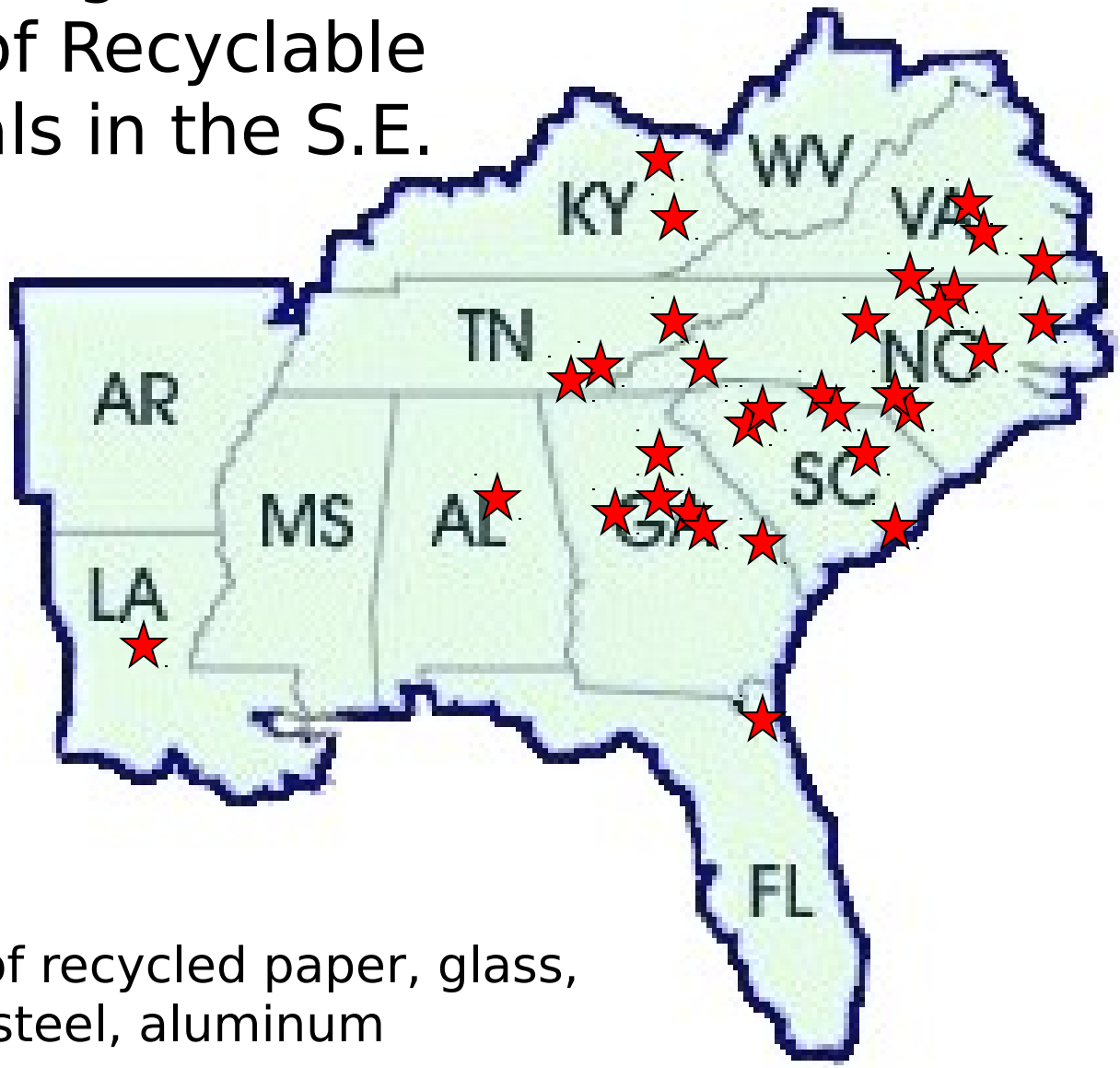
- Commodities move from a MRF to be prepped for sale to an end-user
- Occurs largely w/ plastic and glass
- Most fiber & aluminum go [illegible]rimary [illegible]nd-user

Secondary Processing

Sample markets

Company	Location	Material
Plastic Revolutions	Reidsville	**PET & HDPE**
Envision Plastics	Reidsville	**HDPE**
Clear Path Recycling	Fayetteville	**PET**
Blue Ridge Plastics	Eden	**Post-consumer & industrial**
New Life Plastics	Burlington	**Industrial**
Commercial Plastics Recycling	Conover	**Industrial**
Bromley Plastics	Fletcher	**Industrial**
Strategic Materials	Raleigh & Durham	**Glass**
Reflective Recycling	Wilson & Winston-Salem	**Glass**

Sampling of End-Users of Recyclable Materials in the S.E.



★ = user of recycled paper, glass, plastic, steel, aluminum

End Users

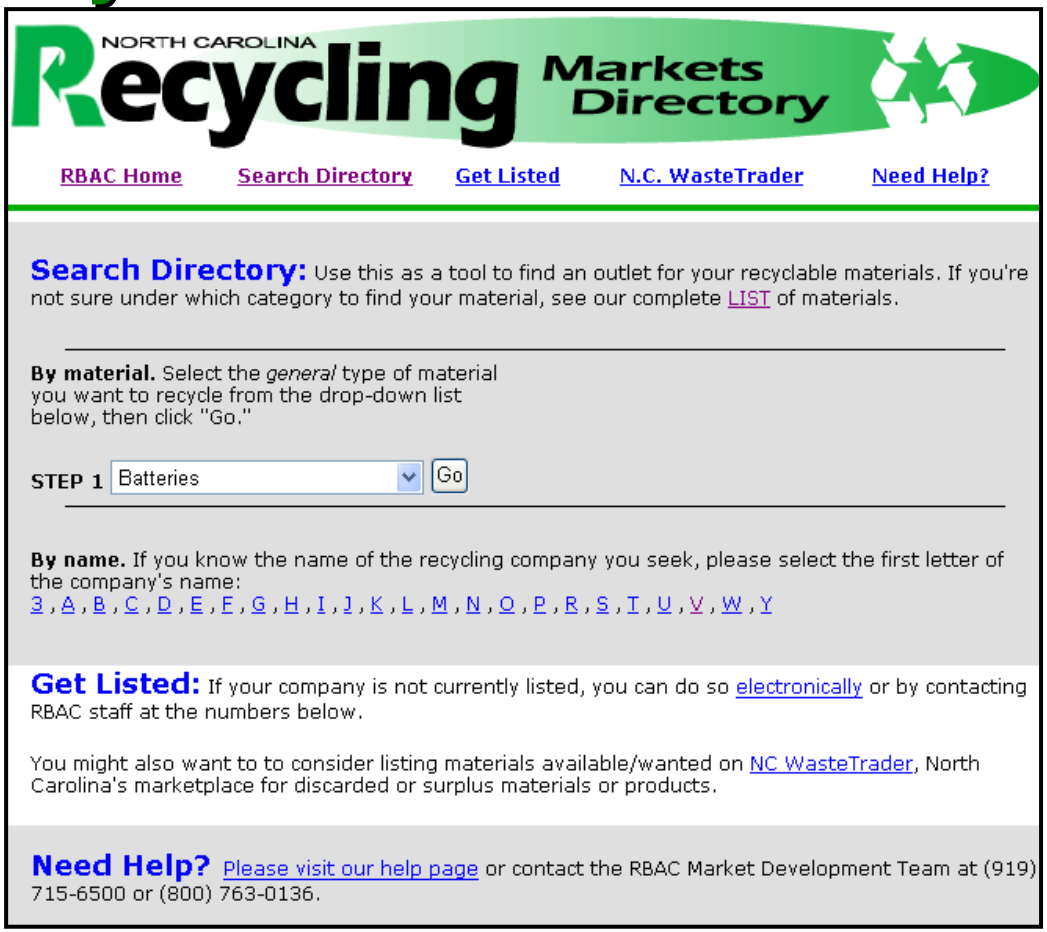
Sample markets in North Carolina

Company	Location	Material
Nucor Steel	Cofield	**Scrap Steel**
Jackson Paper Manufacturing	Sylva	**Cardboard**
Cascades Tissue Group	Rockingham	**Sorted Office Paper**
Cascades Molded Pulp	Rockingham	**Mixed Paper & Newspaper**
Potters Industries	Apex	**Glass**
Verallia (St. Gobain)	Wilson & Henderson	**Glass**
Owens – Illinois	Lexington	**Glass**
Intertech (bottles)	Greensboro	**HDPE plastic**
Toter, Inc. (roll-carts)	Statesville	**HDPE plastic**
Roll-Tech (wheels for carts)	Hickory	**Rubber & Plastic**
Crumpler Plastic Pipe	Roseboro	**HDPE plastic**

NC Recycling Markets Directory

A continuously updated, fully searchable on-line directory.

- Companies that collect, transport, broker, process or remanufacture recovered materials from NC
- 1,000+ company listings; over 700 from NC
- 250+ materials (ABS Plastic to Zinc Oxide)


NORTH CAROLINA
Recycling Markets Directory
RBAC Home
Search Directory
Get Listed
N.C. WasteTrader
Need Help?
Search Directory: Use this as a tool to find an outlet for your recyclable materials. If you're not sure under which category to find your material, see our complete LIST of materials.
By material. Select the general type of material you want to recycle from the drop-down list below, then click "Go."
STEP 1 Batteries
Go
By name. If you know the name of the recycling company you seek, please select the first letter of the company's name:
3 , A , B , C , D , E , F , G , H , I , J , K , L , M , N , O , P , R , S , T , U , V , W , Y
Get Listed: If your company is not currently listed, you can do so electronically or by contacting RBAC staff at the numbers below.
You might also want to to consider listing materials available/wanted on NC WasteTrader, North Carolina's marketplace for discarded or surplus materials or products.
Need Help? Please visit our help page or contact the RBAC Market Development Team at (919) 715-6500 or (800) 763-0136.

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www.p2pays.org/dmrm

Recycling Market Prices

- **RBAC tracks market prices on a quarterly basis**
- **From 3 processors regionally across the state**
- **Have a record of pricing trends since 1995**

Item	January 2011
METALS	
Al (lb)	$.87
Steel Cans (ton)	$297
PLASTICS (lb, baled)	
PETE	$0.26
HDPE	Natural $0.31 Colored $0.20
PAPER (ton)	
Newsprint	$132
OCC	$163
Office	$230
OMG	$140
Mixed	$128
GLASS (ton)	
Brown	$18
Clear	$25
Green	$3

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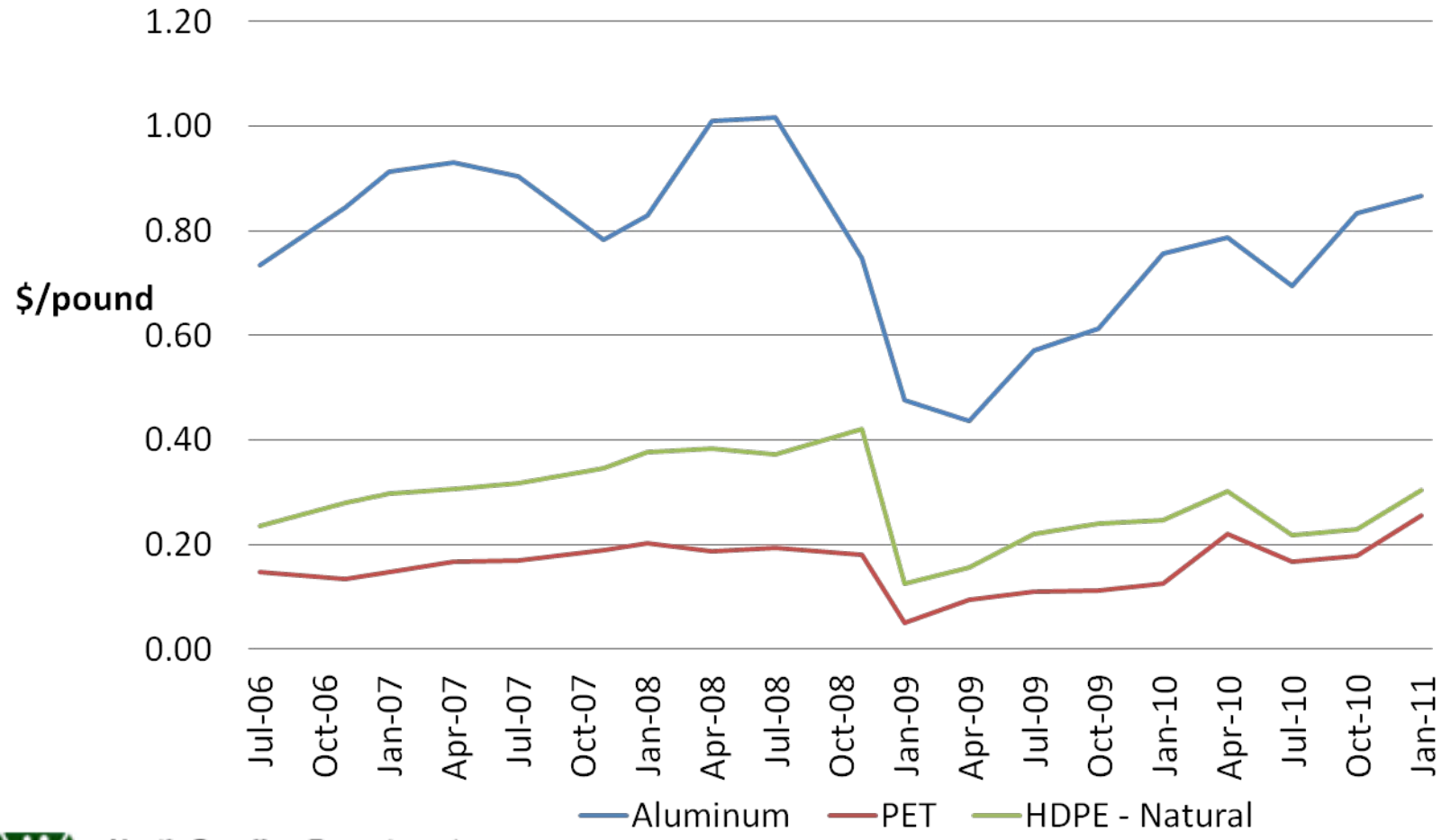
Recycling Price History for Key Container Materials



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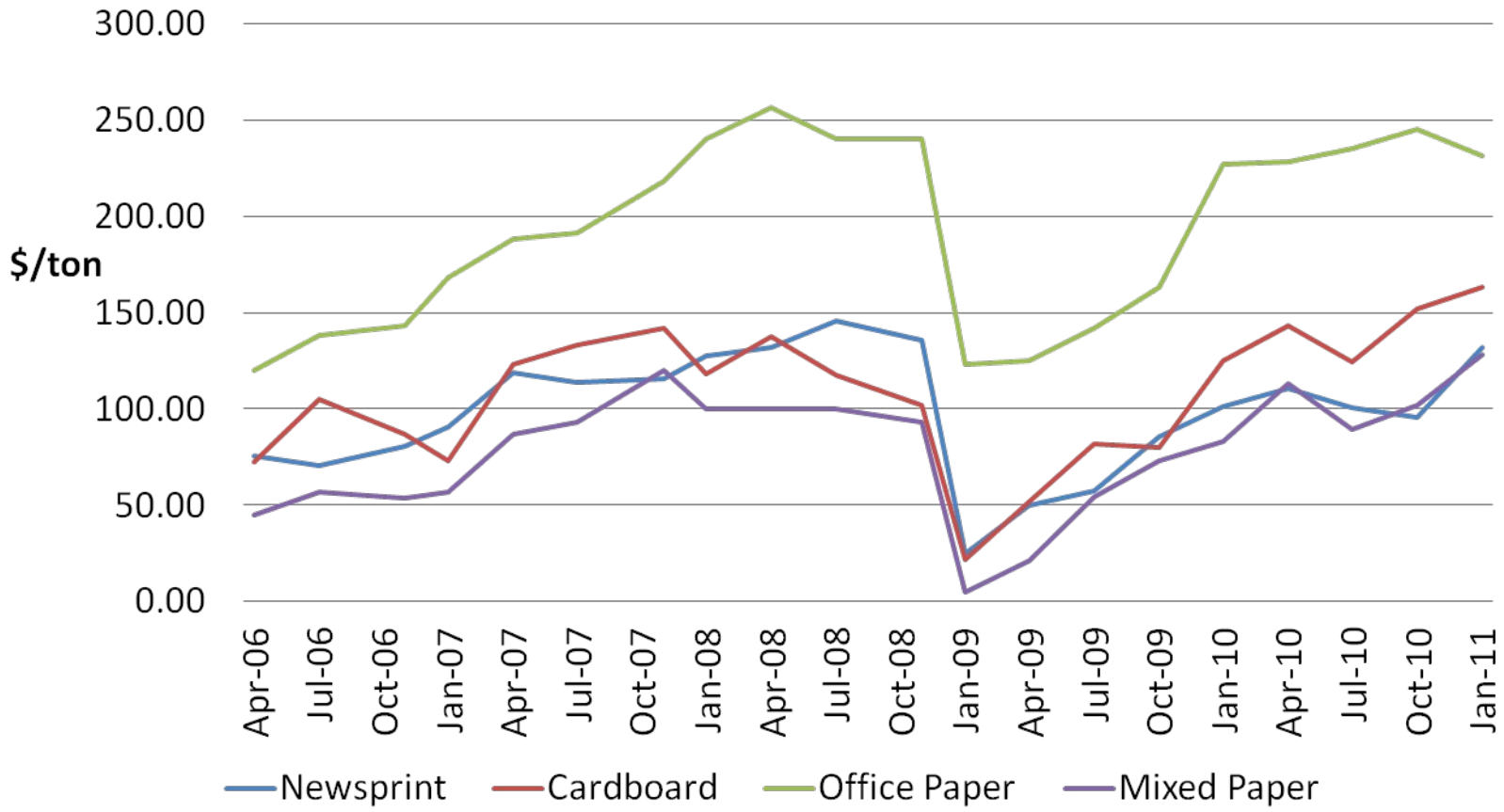
Recent Recycling Price History For Key Fiber Commodities



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RBAC Activities

Business Development

Grants **-** Facilitated over **$10 million** in private sector infrastructure investment for **96 recycling companies** in 2010-2012 with **$2.25 million** in recycling business development grants.

2010 grants - $750,000 to 29 companies, ~$3.6 million matching

2011 grants - $700,000 to 30 companies, ~$3.3 million matching

2012 grants - $800,000 to 37 companies, ~$3.5 million matching

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RBAC Activities

Business Development - ***Other major investment 2010/11***

- Clear Path Recycling – PET *plastic* **($70 million)**
- Synergy Recycling - *electronics* **($20 million)**
- Reflective Recycling – *glass processing* **($8.5 million)**
- Abbey Green– *C&D recycling* **($5 million)**
- Sonoco Recycling – *material recovery facility* **($4 million)**
- Benfield Sanitation – *material recovery facility* **($4 million)**
- Envision Plastics – HDPE *plastic* **($3.5 million)**
- Wesbell Technologies - *electronics* **($360,000)**

others…

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Images of Recycling Investments in NC

Abbey Green C&D Processing, Winston-Salem

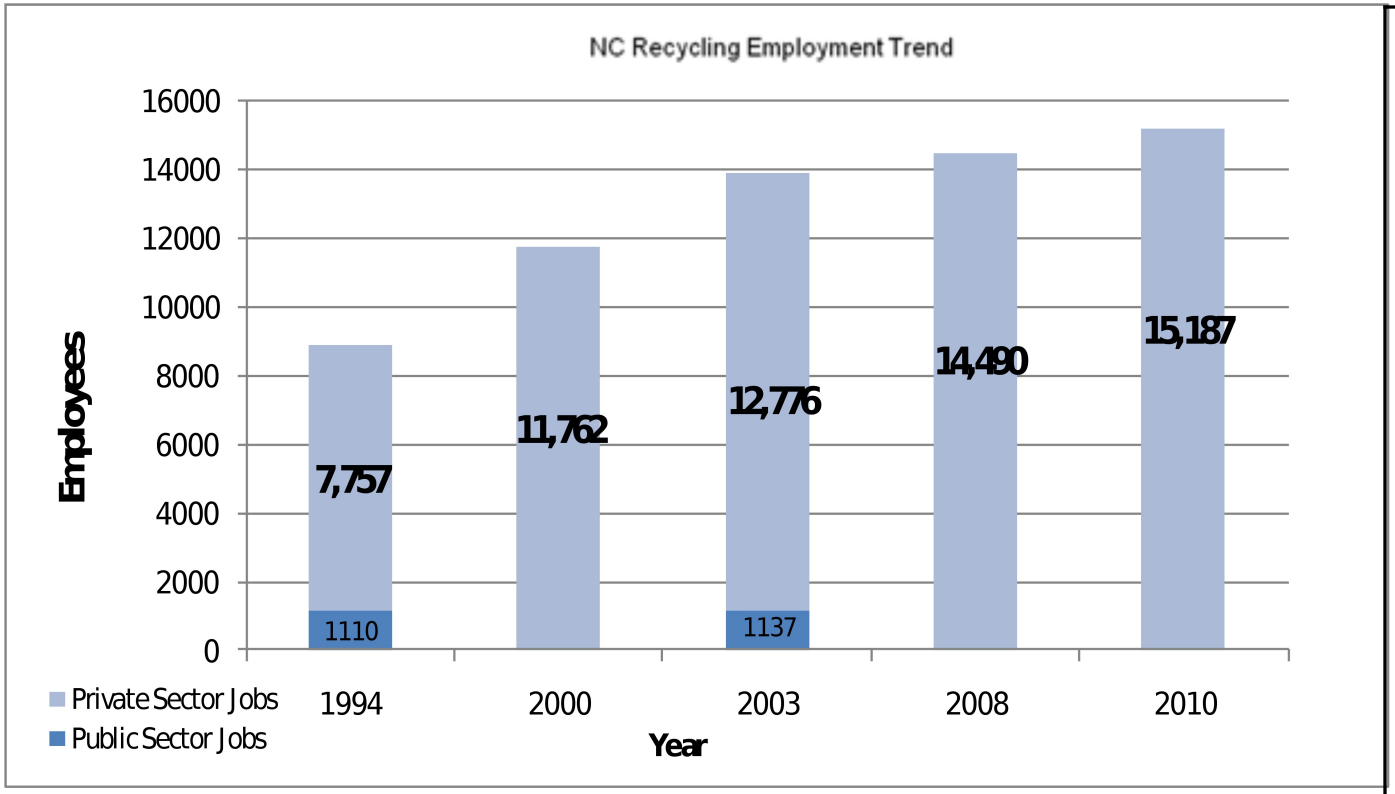
Clear Path Recycling, Fayetteville

Sonoco Recycling, Charlotte

Envision Plastics, Reidsville

Greenway Recycling, Concord

NC Private Sector Recycling Employment Trends



- Approx. **15,200** private sector recycling-related jobs in North Carolina
- Private sector recycling jobs have **increased 4.8** percent since 2008
- The total annual payroll for North Carolina recycling businesses is **$395 million**
- **Forty-eight** percent of recycling businesses surveyed anticipate **creating more jobs** during the next two years
- **Twenty-five** percent of businesses surveyed report **manufacturing** a product using recycled materials

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RBAC Activities
Focus areas

Construction & Demolition Recycling

- Asphalt shingles, material processing at C&D landfills

Collectors Network

- Entrepreneurs filling the need for more recycling collection (res. & comm.)

Electronics Recycling Infrastructure

- Manage material banned from disposal (esp. residential), certification standards

Food Waste Collection

- Need growth of collection infrastructure, residential & commercial

Jobs Study

- 15,200 private sector recycling related jobs (2010), 4.8% growth since 2008 – update coming for 2012-13.

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Looking Ahead

- Continue to rally the C&D recycling community.
- Electronics recycling will quickly mature, with well-positioned companies pushing forward to meet certification requirements.
- Independent collectors continue great impact on underserved areas.
- North Carolina will see it’s first residential collection program for food waste by 2013. Commercial collection for food waste will continue to rise.
- Food Waste Reduction conference in Nov 12-13, 2012 – Charlotte, NC.
- Direct private sector recycling jobs in NC will exceed 20,000 by 2015.

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Thank You!

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919-707-8137

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